

as shown in FIG. 2. Therefore, it is preferable to operate the liquid crystal display panel 3 as a touch panel with a pen or the like. In FIG. 2, the liquid crystal display 3 is positioned on the back side of the keyboard 2.

FIG. 7 is a flow-chart showing an operation of the above-mentioned embodiment. First, the main power of this apparatus is turned ON (step 101) and the state of the display changing switch 10 is checked (step 102). When the switch is in a contact state (step 103), a display changing signal is supplied (step 104), the display of the liquid crystal 3 is turned by 90° (step 105), the other processes are carried out (step 106) and then the process is returned to step 102. When the switch is not in the contact state, the display of the liquid crystal 3 is kept as the initial state (step 107), the other processes are carried out (step 106) and then the process is returned to step 102.

A second embodiment of a small-sized portable information processing apparatus of this invention will now be described with reference to FIGS. 8 through 15. FIG. 8 shows a state of the second embodiment with the liquid crystal display panel being opened by approximately 360° with respect to the apparatus body and FIGS. 9(a), 9(b) and FIG. 10 show the embodiment with the liquid crystal display panel being closed. FIG. 9(b) is an enlarged perspective view of a portion indicated by C in FIG. 9(a).

As shown in FIGS. 9(a) and 9(b), the liquid crystal display panel 3 is provided with a sensor switch 30 at a position near to the hinge member 5 on the back side thereof. On the other hand, the hinge member 5, i.e., a rotatable side, is provided with a projection 32 which interfere with a movement path of a contact 31 of the sensor switch 30.

As shown in FIGS. 9(a), 9(b) and FIG. 10, when the liquid crystal display panel 3 is in a closed position with respect to the apparatus body 1, the relationship between the contact 31 of the sensor switch 30 and the projection 32 of the hinge member 5 are apart from each other, by nearly 180°, the projection 32 of the hinge member 5 does not interfere with the contact 31 of the sensor switch 30 and therefore the switch is in OFF state.

FIGS. 11(a) and 11(b) correspond to FIGS. 9(a) and 9(b), respectively, and FIG. 12 corresponds to FIG. 10. In this state, the liquid crystal display panel 3 is turned with respect to the apparatus body 1 from the position shown in FIGS. 9(a), 9(b) and 10 by 346° (the angle between the apparatus body 1 and the liquid crystal display panel 3 is 14°). In this state, the relationship between the contact 31 of the sensor switch 30 and the projection 32 of the hinge member 5 is a turned state by nearly 180° from the position of FIGS. 9(a), 9(b) and 10, the projection 32 comes into touch with the contact 31 of the sensor switch 30 and therefore the switch is in ON state.

The angle of the liquid crystal display panel 3, with respect to the apparatus body 1, at which the sensor switch 30 performs the ON-OFF changing action, can be suitably selected by changing the position of the projection 32. For example, FIG. 13 shows a case in which the ON-OFF changing action is performed at a position of the liquid crystal display 3 which is turned by 355° with respect to the apparatus body 1 from the state shown in FIGS. 11(a), 11(b) and 12. Also, FIG. 14 shows another case in which the projection 32 comes into touch with the contact 31 of the sensor switch 30 to perform the switch ON-OFF changing action at a position of the liquid crystal display panel 3 which is turned by 35° with respect to the apparatus body 1 from the state shown in FIGS. 11(a), 11(b) and 12.

In the same manner as the first embodiment, the sensor switch 30 and the projection 32 can be provided on the

apparatus body 1 and the hinge member 5, respectively. It is also possible that the sensor switch 30 is provided on the hinge member 5 and the projection 32 is provided on liquid crystal display panel 3 or the apparatus body 1. For example, when the sensor switch 30 is in the state ON, a keyboard lock is effected (i.e., is active), and on the contrary when the sensor switch 30 is in the state OFF, the keyboard is unlocked. If the keyboard lock is to be effected, all of the keys may be made unoperable or only a part of the keys may be made unoperable.

Also, instead of the keyboard lock being effected, any actions to the apparatus can be ignored. For example, all or part of the inputs by the pen or keyboard can be ignored, the presentation on the display can be fully or partially invalidated, or any other actions can be made ineffectual.

FIG. 15 is a flow-chart showing an operation of the second embodiment. First, the main power (not shown) of this apparatus is turned ON (step 201) and the state of the keyboard input lock switch 10 is checked (step 202). When the switch is in a contact state (step 203), a keyboard input lock signal is supplied (step 204), the keyboard input lock is effected (step 205) so that an input operation can only be performed on the display (step 206), the other processes are carried out (step 207) and then the process is returned to step 202. When the switch is not in the contact state, the keyboard input lock is not effected (step 205) so that an input operation can be performed both by the keyboard and the display (step 208), the other processes are carried out (step 207) and then the process is returned to step 202.

It should be understood by those skilled in the art that the foregoing description relates to only some preferred embodiments of the disclosed invention, and that various changes and modifications may be made to the invention without departing from the spirit and scope thereof.

What is claimed is:

1. An information processing apparatus, comprising:

a body;

a display panel attached to said body and rotatably movable through an angle of up to substantially 360° relatively to said apparatus body, said display panel having plural individually selectable data display orientations;

a detector detecting at least a predetermined size of the angle between said apparatus body and said display panel; and

a display orientation selector selecting a corresponding one of said data display orientations in accordance with the size of the angle detected by the detector, in such a manner that the data display orientation is changed automatically by approximately 90° when the display panel is rotated by approximately 360° with respect to the base.

2. An information processing apparatus according to claim 1, wherein said body further comprises an input unit.

3. An information processing apparatus according to claim 2, further comprising:

a disabling unit selectively disabling operation of said input unit in accordance with said detector detecting an angle of a prescribed size between said display panel and said body.

4. An information processing apparatus according to claim 2, wherein said input unit is a keyboard.

5. An information processing apparatus according to claim 1, wherein said display panel further comprises a touch sensitive input unit.

6. The information processing apparatus according to claim 5, further comprising: